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SUPPLEMENTARY MATERIAL

corresponding to:

The Parahox gene *Pdx1* is required to maintain positional identity in the adult foregut

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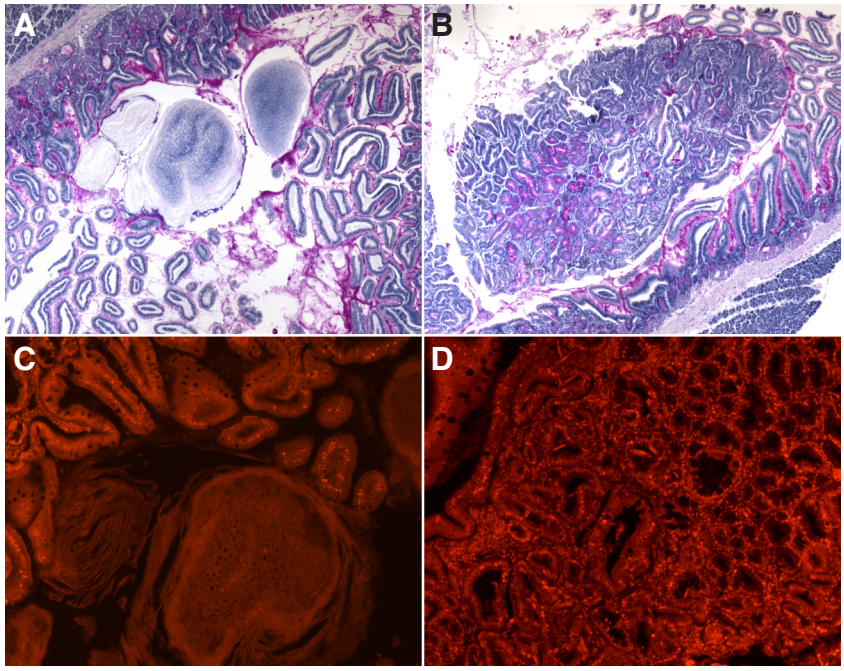
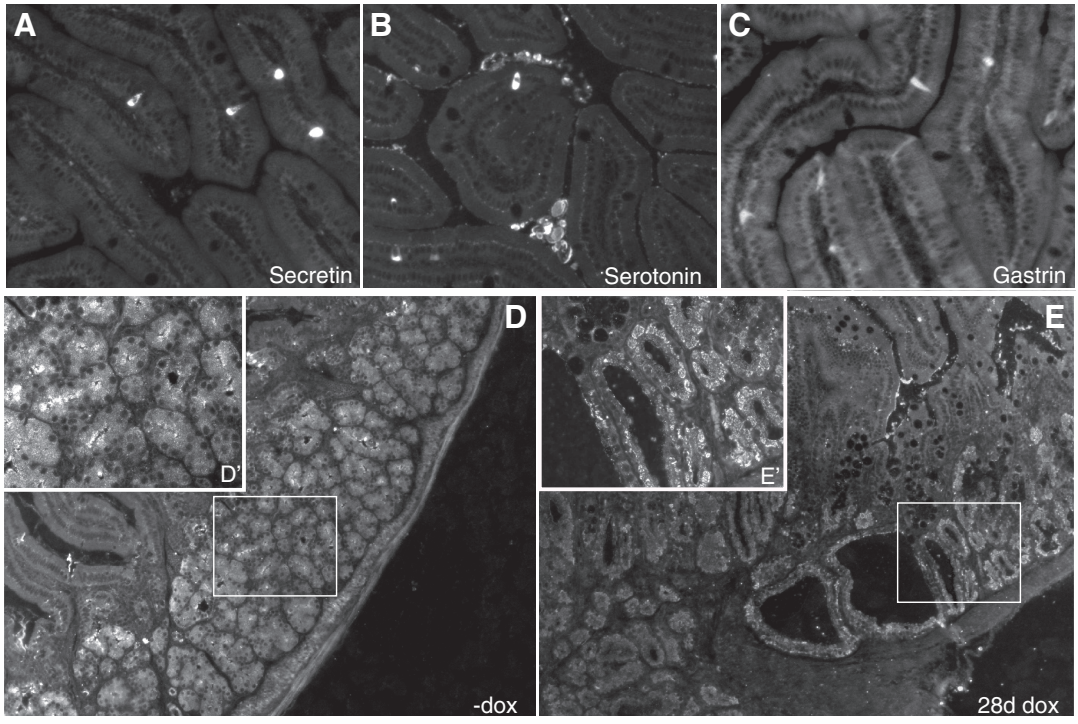
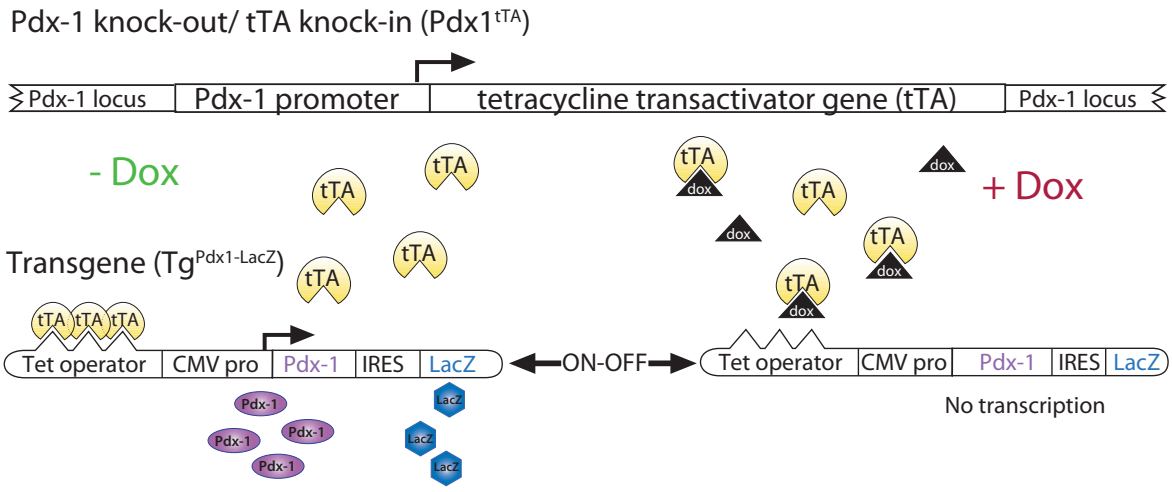


Supplementary Fig. S1. Hamartomas proliferate during the recovery phase. *Mice treated with doxycycline for 14d were labelled with BrdU twice a week during the 6 week recovery period. Early sections of the mouse gut corresponding to the hamartomas detailed in the white box* **(A,C)** *and black box* **(B,D)** *in Fig. 3B. PAS stains* **(A,B)** *show the outer SSE* **(A)** *and internal* **(B)** *morphology of the hamartomas. The SSE was not labelled with BrdU* **(C)** *suggesting it arose prior to dox withdrawal. The extensive BrdU labelling (red nuclei) in* **(D)** *demonstrates continued proliferation of the hamartoma during the recovery period. Bar, 200μm.*



Supplementary Fig. S2. Gastrin expression is altered in the Brunners glands of the Pdx1 repressed mice. *Secretin* **(A)**, *serotonin* **(B)** *and gastrin* **(C)** *are detected by immunofluorescence staining in enteroendocrine cells of mice treated with doxycycline for 28 days. Homogenous expression of gastrin in the Brunner's glands of untreated mice* **(D, D')** *is reduced and peri-nuclear following repression of Pdx1* **(E, E')**.



Supplementary Fig. S3.The tet-off system for the conditional repression of Pdx1. *Pdx1$^{tTA/+}$ mice were created by replacing the Pdx1 coding sequence with a gene encoding the tetracycline trasactivator (tTA) by homologous recombination. Transgenic mice carrying a multimeric tTA responsive operator driving the expression of Pdx1 and a reporter (LacZ or GFP) were crossed to the Pdx1$^{tTA/+}$ mice to produce Pdx1$^{tTA/tTA}$;Tg$^{Pdx1\text{-}GFP}$ or Pdx1$^{tTA/tTA}$;Tg$^{Pdx1\text{-}LacZ}$ mice. Pdx1 is transcribed from the transgene via transcription of the tTA in response to normal Pdx1 activation signals. Doxycycline binds to the tTA and represses transcription from the transgene.*